USSN: 09/986,332

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

Claims 1-207 (canceled).

208. (currently amended): A nitride semiconductor growth method comprising the

steps of:

(a) forming a first selective growth mask on a support member made up of a

dissimilar substrate made of a material different from a nitride semiconductor and having a major

surface, and an underlayer made of a nitride semiconductor formed on the major surface of the

dissimilar substrate having an off-angled major surface from the horizontal plane, said first

selective growth mask having a plurality of first windows selectively exposing an upper surface

of the underlayer of the support member;

growing first nitride semiconductor portions from the upper surface portions of (b)

the underlayer which are exposed from the windows, until the first nitride semiconductor

portions grown in the adjacent windows combine with each other on an upper surface of said

selective growth mask;

(c) forming a second selective growth mask on the first nitride semiconductor

portions grown in the step (b), said second selective growth mask having a plurality of second

windows selectively exposing upper surfaces of the first nitride semiconductor portions;

USSN: 09/986,332

(d) growing second nitride semiconductor portions from the upper surfaces of the first nitride semiconductor portions which are exposed from the second windows, until the second nitride semiconductor portions grown in adjacent windows combine with each other on an upper surface of said second selective growth mask to form a nitride semiconductor substrate; and

- growing nitride semiconductor layers including an active layer over the (e) semiconductor substrate.
- 209. (previously presented): A nitride semiconductor growth method according to claim 208, wherein the second selective growth mask is positioned to cover the first windows of the first selective growth mask.
- 210. (previously presented): A nitride semiconductor growth method according to claim 208, wherein the first nitride semiconductor portions and second nitride semiconductor portions are nitride semiconductor crystals grown laterally on the corresponding selective growth mask.
- 211. (previously presented): A nitride semiconductor growth method according to claim 208, wherein the dissimilar substrate is one selected from the group consisting of a sapphire having the C plane, the R plane, or the A plane as a major surface, spinel, SiC, ZnS, GaAs, Si, ZnO, and $La_xSr_{1-x}Al_vTa_{1-v}O_3$.

USSN: 09/986,332

212. (previously presented): A nitride semiconductor growth method according to claim

208, wherein the nitride semiconductor is a light-emitting diode or laser diode device.

213. (previously presented): A nitride semiconductor growth method according to claim

208, wherein said step of growing nitride semiconductor layers including said active layer over

the nitride semiconductor substrate includes forming said active layer to include indium.

214. (previously presented): A nitride semiconductor growth method according to claim

208, wherein said step of growing nitride semiconductor layers including said active layer over

the nitride semiconductor substrate further comprises steps of:

forming a buffer layer in contact with the nitride semiconductor substrate, the buffer layer

being a distorted superlattice structure formed by alternately stacking first and second nitride

semiconductor layers having different compositions.

215. (previously presented): A nitride semiconductor growth method according to claim

208, further comprising a step of doping said nitride semiconductor substrate with an n-type

impurity.

USSN: 09/986,332

216. (previously presented): A nitride semiconductor growth method according to claim

215, wherein the n-type impurity is one element selected from the group consisting of Si, Ge, Sn,

and S.

217. (currently amended): A nitride semiconductor substrate growth method comprising

the steps of:

(a) forming a first selective growth mask on a support member made up of a dissimilar

substrate made of a material different from a nitride semiconductor and having a major surface,

and an underlayer made of a nitride semiconductor formed on the major surface of the dissimilar

substrate having an off-angled major surface from the horizontal plane, said first selective

growth mask having a plurality of first windows selectively exposing an upper surface of the

underlayer of the support member;

(b) growing first nitride semiconductor portions from the upper surface portions of the

underlayer, which are exposed from the windows, until the first nitride semiconductor portions

grown in the adjacent windows combine with each other, on an upper surface of said selective

growth mask;

(c) forming a second selective growth mask on the first nitride semiconductor portion

grown in the step (b), said second selective growth mask having a plurality of second windows

selectively exposing upper surfaces of the first nitride semiconductor portions; and

(d) growing second nitride semiconductor portions from the upper surfaces of the first

nitride semiconductor portions, which are exposed from the second windows, until the second

USSN: 09/986,332

nitride semiconductor portions grown in the adjacent windows combine with each other on an upper surface of said second selective growth mask.

218. (previously presented): A nitride semiconductor substrate growth method according to claim 217, wherein the second selective growth mask is positioned to cover the first windows of the first selective growth mask.

219. (previously presented): A nitride semiconductor substrate growth method according to claim 217, wherein the first nitride semiconductor portions and second nitride semiconductor portions are nitride semiconductor crystals grown laterally on the corresponding selective growth mask.

220. (previously presented): A nitride semiconductor substrate growth method according to claim 217, wherein the dissimilar substrate is one selected from the group consisting of a sapphire having the C plane, the R plane, or the A plane as a major surface, spinel, SiC, ZnS, GaAs, Si, ZnO, and La_xSr_{1-x}Al_yTa_{1-y}O₃.

USSN: 09/986,332

221. (withdrawn--currently amended):

A nitride semiconductor substrate

comprising:

a support member having:

a dissimilar substrate made of a material different from a nitride semiconductor

and having a major surface an off-angled major surface from the horizontal plane, and

an underlayer made of a nitride semiconductor formed on the major surface of the

dissimilar substrate;

a first selective growth mask formed on the support member, the first selective growth

mask having a plurality of first windows selectively exposing an upper surface of the underlayer

of the support member;

first nitride semiconductor portions grown from the upper surface portions of the

underlayer, which are exposed from the windows on an upper surface of said selective growth

mask;

a second selective growth mask formed on the first nitride semiconductor portion, the

second selective growth mask having a plurality of second windows selectively exposing upper

surfaces of the first nitride semiconductor portions; and

second nitride semiconductor portions grown from the upper surfaces of the first nitride

semiconductor portions, which are exposed from the second windows on an upper surface of said

second selective growth mask.

USSN: 09/986,332

222. (withdrawn): A nitride semiconductor substrate according to claim 221, wherein the second selective growth mask is positioned to cover the first windows of the first selective growth mask.

223. (withdrawn): A nitride semiconductor substrate according to claim 221, wherein the first nitride semiconductor portions and the second nitride semiconductor portions are nitride semiconductor crystals grown laterally.

224. (withdrawn): A nitride semiconductor substrate according to claim 221, wherein the dissimilar substrate is one selected from the group consisting of a sapphire having the C plane, the R plane, or the A plane as a major surface, spinel, SiC, ZnS, GaAs, Si, ZnO, and La_xSr_{1-x}Al_yTa_{1-y}O₃.

225. (withdrawn--currently amended): A nitride semiconductor structure having a substrate, the substrate comprising:

a support member having:

dissimilar substrate;

a dissimilar substrate made of a material different from a nitride semiconductor and having a major surface that is an off-angled major surface from the horizontal plane, and an underlayer made of a nitride semiconductor formed on the major surface of the

USSN: 09/986,332

a first selective growth mask formed on the support member, the first selective growth mask having a plurality of first windows selectively exposing an upper surface of the underlayer of the support member;

first nitride semiconductor portions grown from the upper surface portions of the underlayer, which are exposed from the windows on an upper surface of said selective growth mask:

a second selective growth mask formed on the first nitride semiconductor portion, the second selective growth mask having a plurality of second windows selectively exposing upper surfaces of the first nitride semiconductor portions; and

second nitride semiconductor portions grown from the upper surfaces of the first nitride semiconductor portions, which are exposed from the second windows on an upper surface of said second selective growth mask.

226. (withdrawn): A nitride semiconductor structure according to claim 225, wherein the second selective growth mask is positioned to cover the first windows of the first selective growth mask.

227. (withdrawn): A nitride semiconductor structure according to claim 225, wherein the first nitride semiconductor portions and second nitride semiconductor portions are nitride semiconductor crystals grown laterally.

USSN: 09/986,332

228. (withdrawn): A nitride semiconductor structure according to claim 225, wherein the dissimilar substrate is one selected from the group consisting of a sapphire having the C plane, the R plane, or the A plane as a major surface, spinel, SiC, ZnS, GaAs, Si, ZnO, and La_xSr_{1-x}Al_yTa_{1-y}O₃.

- 229. (withdrawn): A nitride semiconductor structure according to claim 225, wherein said nitride semiconductor structure is a light-emitting diode or laser diode device.
- 230. (withdrawn): A nitride semiconductor structure according to claim 225, further comprising an active layer containing indium.
- 231. (withdrawn): A nitride semiconductor structure according to claim 225, wherein said second nitride semiconductor portions form a nitride semiconductor substrate, said nitride semiconductor structure further comprising a buffer layer in contact with the nitride semiconductor substrate, wherein the buffer layer is a distorted superlattice structure of alternately stacked first and second nitride semiconductor layers having different compositions.
- 232. (withdrawn): A nitride semiconductor according to claim 225, wherein said second nitride semiconductor portions form a nitride semiconductor substrate, and wherein the nitride semiconductor substrate is doped with an n-type impurity.

USSN: 09/986,332

- 233. (withdrawn): A nitride semiconductor substrate according to claim 232, wherein the n-type impurity is one element selected from the group consisting of Si, Ge, Sn, and S.
- 234. (new): A method according to claim 208, wherein the off-angled major surface is formed stepwise.
- 235. (new): A method according to claim 208, wherein the off-angled major surface forms C plane.
- 236. (new): A method according to claim 208, wherein the off-angle with respect to the C plane is equal of less than 1°.
- 237. (new): A method according to claim 217, wherein the off-angled major surface is formed stepwise.
- 238. (new): A method according to claim 217, wherein the off-angled major surface forms C plane.

AMENDMENT UNDER 37 C.F.R. § 1.114 USSN: 09/986,332

239. (new): A method according to claim 217, wherein the off-angle with respect to the C plane is equal of less than 1°.